REMARKS

In the Office Action, the Examiner noted that claims 1-27 are pending in the application and that claims 1-27 are rejected. In view of the following discussion, the Applicant submits that none of the claims now pending in the application are anticipated under the provisions of 35 U.S.C. §102 or are obvious under the provisions of 35 U.S.C. §103. Thus, the Applicant believes that all of these claims are now in condition for allowance.

I. REJECTION OF CLAIMS 1-3, 7, 10-16, 18, 21, 23 AND 24 UNDER 35 U.S.C. §102

The Examiner rejected claims 1-3, 7, 10-16, 18, 21, 23, and 24 as being anticipated by the Kangas et al. patent (United States patent number 6,356,763, issued March 12, 2002, hereinafter Kangas). The rejection is respectfully traversed.

Kangas teaches a mobile communication station that is used to measure the times of arrival of radio signals respectively transmitted by a plurality of radio transmitters. (see Abstract).

Kangas, however, does not teach each and every element of Applicant's invention as recited in independent claims 1, 18, 21, 24, and 27. Namely, Kangas does not teach or suggest the simulcasting of signals to a mobile station from a plurality of base stations. Specifically, Applicant's independent claims 1, 18, 21, 24 and 27 respectively recite:

> 1. A method for determining the location of a mobile station, comprising:
> receiving a plurality of simulcast signals having substantially identical information from respective base stations;
> determining relative time of arrival information for the received plurality of simulcast signals; and
> determining the position of the mobile station. (Emphasis added)
>
> 18. A method for receiving location information for a mobile station, comprising:
> transmitting simulcast signals having substantially identical information to the mobile station; and
> receiving mobile station location information from the mobile station determined from relative time of arrival information for the simulcast signals. (Emphasis added)
>
> 21. A mobile station, comprising:
> a receiver for receiving simulcast signals having substantially identical information from a plurality of base stations; and

a processor for determining time of arrival information for the received simulcast signals and identifying a location of the mobile station. (Emphasis added)

24. A wireless network for providing location specific information to a mobile station, comprising:
a plurality of base stations for transmitting simulcast signals having substantially identical information;
a mobile station for receiving the simulcast signals and determining a location of the mobile station. (Emphasis added)

27. A wireless network, comprising:
a plurality of base stations for transmitting simulcast signals having substantially identical information to mobile stations and receiving mobile station location information from at least one of the mobile stations to broadcast location specific information to the mobile stations. (Emphasis added)

The Applicant's invention teaches a method for determining the location of a mobile station utilizing simulcasted signals that are transmitted from a plurality of base stations. Simulcasting is the transmission of a particular signal from a plurality of base stations at the same moment in time. Specifically, the Applicant describes simulcasting as the "simultaneous transmission of **substantially the same information content** from multiple base stations" (see e.g., Applicant's specification, page 5, paragraph 3). Namely, simulcasting creates an artificial multipath environment that is used by the Applicant's system to create diversity. Applicant's invention teaches a system that can simulcast simultaneous transmission of **substantially identical information** from a plurality of basestations BS1-N. With this arrangement, the link performance is improved by simulating multipath. Since the same signal from multiple base stations is received by a mobile station, the difference in path delay results in frequency selective fading with narrow spacing between multipath nulls interacting with the inherent frequency diversity of the OFDM system. (see e.g., Applicant's specification, page 6, paragraph 5).

As previously argued, the Kangas reference does not teach this aspect of the invention. Notably, Kangas does **not** teach or mention the simultaneous transmission of substantially identical information content from multiple base stations anywhere in the patent. Specifically, although Kangas does teach that two signals are transmitted simultaneously from two base transceiver stations BTS1 and BTS2, Kangas does not teach that these are simulcasted signals, i.e., having substantially identical information

content. In other words, Kangas is silent as to what is the information that is being carried in the signals that are being simultaneously sent to the mobile station. Since Kangas is only concerned about the arrival time of the signals, there is no teaching that these signals are simulcasted signals, i.e., having substantially identical information.

The Examiner rebuts the Applicant's arguments by stating that Kangas at column 4, lines 13-28 teaches that the signals are substantially identical in the sense that each signal includes second search code (SSC), wherein each SSC contains 16 codes that are transmitted simultaneously with a first search code (FSC). (See Final Office Action, p. 2, ll. 11-14.) The Applicant respectfully submits that this simply teaches that each signal would have similar formats and not substantially identical information content.

In fact, the section cited by the Examiner teaches away from the Applicant's invention. Kangas teaches each base transceiver station has an associated SSC. (See Kangas, col. 4, ll. 12-15.) In other words, each base transceiver station will have a unique and different SSC pattern relative to other base transceiver stations. (See Kangas, col. 4, ll. 29-33, "a mobile station performing the proposed downlink OTD positioning technique correlates the temporal location of that base transceiver station's FSC peak with the 16 codes of its (i.e. the base transceiver station's) SSC pattern".) Therefore, Kangas actually teaches that each signal has different information content because each signal would have a different set of 16 codes for each SSC associated with each respective base transceiver station. Therefore, Kangas fails to anticipate the Applicant's invention.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). Since Kangas does not disclose a plurality of base stations simulcasting signals having substantially identical information to a mobile device, Kangas does not teach each and every element of the Applicant's invention as set forth in independent claims 1, 18, 21, 24 and 27. Therefore, the Applicant contends that independent claims 1, 18, 21, 24 and 27 are not anticipated by Kangas and, as such, fully satisfy the requirements of 35 U.S.C. §102.

Dependent claims 2-3, 7, 10-16, and 23 depend, either directly or indirectly, from claims 1, 18, and 21 and recite additional features thereof. As such and for the exact same reasons set forth above, the Applicant submits that claims 2-3, 7, 10-16, and 23 are also not anticipated by the teachings of Kangas. Therefore, the Applicant submits that claims 2-3, 7, 10-16, and 23 fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

II. REJECTION OF CLAIMS UNDER 35 U.S.C. §103

A. Claims 4-6, 8, 9, 19, 20, 22, and 25

The Examiner rejected claims 4-6, 8, 9, 19, 20, 22, and 25 as being unpatentable over Kangas in view of well-known prior art (allegedly US Patents 6,166,691, 6,243,648, or 5,537,398). The rejection is respectfully traversed. Kangas is discussed above.

The Examiner states that Kangas fails to disclose "wherein the simulcast uses OFDM modulation" and "various techniques of locating a mobile station such as GPS and Doppler Shift". However, the Examiner contends that such techniques are well known in the art, and thus, takes Official Notice as such. The Examiner's attention is directed to the fact that Kangas in view of the Official Notice fails to disclose the simultaneous transmissions of simulcasting signals having substantially identical information from a plurality of base stations to a mobile station as described by the Applicant's invention. Since the combination of the Kangas and the Official Notice fails to teach or suggest the Applicant's invention as a whole as recited in Applicant's independent claims, the Applicant contends that claims 4-6, 8, 9, 19, 20, 22, and 25 are not made obvious by Kangas in view of the Official Notice and, as such, fully satisfy the requirements of 35 U.S.C. §103.

Dependent claims 4-6, 8, 9, 19, 20, 22, and 25 depend, either directly or indirectly, from claims 1, 18, 21, and 24, respectively, and recite additional features thereof. As such and for the exact same reasons set forth above, the Applicant submits that claims 4-6, 8, 9, 19, 20, 22, and 25 are not made obvious by Kangas in view of the Official Notice. Therefore, the Applicant submits that claims 4-6, 8, 9, 19, 20, 22, and 25 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

B. Claims 17, 26, and 27

The Examiner rejected claims 17, 26, and 27 as being unpatentable over Kangas in view of the Oren patent (United States patent 6,725,045, hereinafter Oren). The rejection is respectfully traversed.

Kangas is discussed above. Oren teaches a method and system for locating people and routing telephone calls to telephone stations selected by the called party. According to some embodiments of the present invention, the system may include wireless personal units and a location and routing unit adapted to locate the personal units and to route an incoming call intended for a telephone user associated with a particular personal unit to any one of the telephone stations selected by the telephone user (see Abstract).

The Examiner's attention is directed to the fact that Kangas and Oren (either singly or in any permissible combination) fail to disclose the simulcasting of signals having substantially identical information from a plurality of base stations that is received at a mobile station as described by the Applicant's invention. Kangas fails to teach the simultaneous transmission of signals having substantially identical information from a plurality of base stations that is received at a mobile station. Similarly, Oren also does not teach, suggest, or mention the simultaneous transmission of signals from a plurality of base stations that is received at a mobile station. Since Oren fails to bridge the substantial gap existing between the Applicant's invention and Kangas, the Applicant contends that the combination of Kangas and Oren does not teach the Applicant's invention as a whole.

Therefore, even if the two references could somehow be operably combined (and the Applicant submits that the references cannot be properly combined), the resulting combination of Kangas and Oren would still fail to teach or suggest the simultaneous transmission of signals having substantially identical information from a plurality of base stations that is received at a mobile station as claimed in independent claims 1, 24 and 27.

III. CONCLUSION

Thus, Applicant submits that none of the claims presently in the application are anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Consequently, Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the present adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

May 22, 2007
Date

Kin-Wah Tong, Attorney
Reg. No. 39,400
(732) 530-9404

Patterson & Sheridan, LLP
Attorneys at Law
595 Shrewsbury Avenue
Suite 100
Shrewsbury, NJ 07702

Thus, the Examiner has failed to present a prima facie case of obviousness in combining Kangas with Oren to arrive at the claimed invention of Applicant's claim 17 and 26 since these claims depend directly from claims 1 and 24, respectively. Therefore, the Applicant submits that claims 17, 26 and 27 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Withdrawal of the rejection is respectfully requested.